# WHAT IS A TOOL

A tool is a device that helps a person to do work. With tools, work can be done faster, better and more safely. Tools are extensions of (addition to) hands and arms. Tools can be classified as:

## 1. HAND TOOLS

Hand tools are simple tools that are powered by human muscle. Some examples are hammers, screwdrivers, hand saws and files.

## 2. PORTABLE POWER TOOLS

Portable power tools can be moved easily from place to place. They is one major difference between hand tools and portable power tools. Portable power tools have a motor that provides the power to do the work. The operator guides and directs the tool. Some examples are the portable electric drill, portable sabre saw, portable electric router and portable circular saw.

## 3. POWER MACHINES

Power machines are bigger and more powerful then portable power tools. The same kind of work is done with them as the portable power tools. But, power machines are generally more accurate and are stationary (not portable). They are mounted on pedestals or permanent bases. Some examples are band saw, drill press, lathe and jointer.

## 4. INDUSTRIAL MACHINES

Industrial machines are used in the manufacturing industry. They are usually large and powerful. Most of these machines are desgned for special purposes. The operator may simply load the work into the machine and push the "start" button. The machine does the rest.

# BASIC MACHINES

All tools are related to each other in that they use one or more of the basic machines.
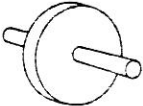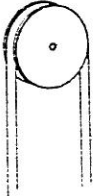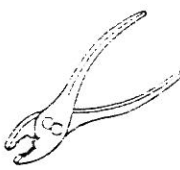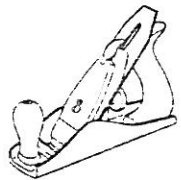
## SIX BASIC MACHINES
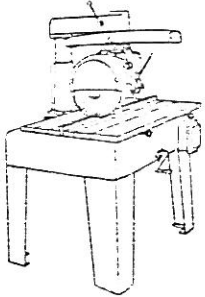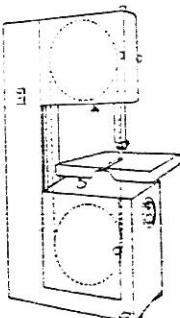
1. WHEEL
2. LEVER
3. PULLEY
4. SCREW
5. INCLINED PLANE
6. WEDGE

These basic machines change the speed or force produced by a person. All tools are related to one or more of these six basic machines.

## ACTIVITY

DIRECTIONS

On the next page sketch (3) tools not shown in the examples. You can choose any hand, portable power, or power machine tool found in our shop. Identify the tool and the basic machine on the lines provided.



| Wheel | Pulley | Lever | Inclined plane | Wedge | Screw |

1.  TOOL_____ BASIC MACHINE_____

2.  TOOL_____ BASIC MACHINE_____

3.  TOOL_____ BASIC MACHINE_____